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PETER MAGGIORE
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**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**

April 16,2002

Dr. John C. Browne, Director
Los Alamos National Laboratory
P.O. Box 1663, MS Al00
Los Alamos, NM 87545

Mr .David A. Gurule, Area Manager
Los Alamos Area Office
Department of Energy
528 35th Street, MS A316
Los Alamos, NM 87544

**SUBJECT:** **NOTICE OF DEFICIENCY**
**TA-54 PART B RCRA PERMIT APPLICATION**
**SEPTEMBER 1999, REVISION 0.1**
**DECEMBER 2000, REVISION 2.0**
**LOS ALAMOS NATIONAL LABORATORY EPA ID# NMO890010515**
**HWB-LANL-99-050**

Dear Dr. Browne and Mr. Gurule:

The New Mexico Environment Department (NMED) has reviewed the above-referenced Application for technical adequacy, as required under 20.4.2.201.3 NMAC.

NMED requires additional information from the Permittees in order for the Application to be considered technically adequate. The additional information that must be addressed is described in Atachment A.

The Permittees must submit the requested information to NMED within sixty days of receipt of this letter.

If you have any questions or need additional information please contact Carl Will of my staff at 505-428-2542.

Sincerely,

James

James P. Bearzi
Chief
Hazardous Waste Bureau

attachment

cc: ] .Kieling, NMED HWB
D. Cobrain, NMED HWB
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]. Ellvinger, LANL ESH-19, MS K490
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G. Turner, DOE LAAO, MS A316

File: Reading and LANL TA-54

**ATTACHMENT A**
**Notice of Deficiency**
**TA-54 RCRA Part B Application**
**December 2000, Revision 2.0**
**September 1999, Revision 0.1**
**January 1999, Revision 0.0**

**April 16, 2002**

## GENERAL COMMENTS

1. The Application lacks sufficient detail. While a generic description is provided, the Application does not identify individual container storage units (CSU's) or provide sufficient detail on how specific container storage units and waste handling activities will comply with regulatory requirements. When describing activities, construction, and other practices that demonstrate compliance with regulatory requirements, include all such practices and replace "may" with "will" throughout. Revise the Application accordingly.

2. The Application does not provide adequate references to figures, including engineering drawings. Revise the Application to include all pertinent figures and engineering drawings and include a reference within the Application text to identify the figure or drawing for each CSU. In many cases, drawings do not have an associated figure number, rendering a reference difficult. Label all figures, drawings, and exhibits.

3. Much of the technical information that should be in the Application is referenced to another document, for example, the LANL Environmental Restoration (ER) Project MDA Core Document. Therefore, it is difficult to ascertain whether the Application is technically adequate. Revise the Application to include a statement clearly identifying what other documents must be reviewed in conjunction with the Application to identify all the necessary technical information. Cite the page numbers in the referenced documents for each citation in the Application in addition to the document titles.

4. Revise the Application to address all hazardous waste management units at TA-54. There is more than one CSU at Areas G and L and T A-54 West. A description of each CSU must be included in the Application, including the capacity, types of waste stored, and a demonstration of compliance with regulatory requirements. MDA H is a regulated unit in post-closure care, and must be included in the Application. In the final revised Application, include all units added since the original Application, including the DVRS and CHAPS units. Replace "CSA" with "CSU" throughout, because a hazardous waste management unit is defined and has requirements in the regulations, while an area has no defined meaning under the regulations.

5. The Application must include a Closure Plan and Post-Closure Plan addressing closure and post-closure care requirements for MDA's G, H, and L in addition to closure of CSU's.

6. The Application must demonstrate compliance with groundwater monitoring requirements under 20.4.1.500 NMAC (incorporating 40 C.F.R. §§ 264.91 through 100). MDA's G, H, and L are regulated units under 20.4.1.500 NMAC (incorporating 40 C.F.R § 264. 90(a)(2)).

7. Revise the Application to delete Attachment G and include all information in Attachment G in Section 2.0. Include one section in the Application for each subject matter, and include all of each subject matter in that section, so that the demonstration of compliance with a regulatory requirement can be reviewed in its entirety at one location in the Application. There is no reason to have a section in the Application titled "Container Storage," "submitted to address the applicable container storage requirements of the New Mexico Administrative Code," that "provides general descriptions of the Technical Area (TA) 54 container storage areas (CSAs) and waste management practices," and have an attachment titled "Container Management," which "addresses the applicable container storage requirements of the New Mexico Administrative Code," and "provides an overview of current facility operations and waste management practices at Technical Area (TA) 54."
Section 2.0 includes "Designated Container Storage Areas," "Storage Structures, Locations, and Capacities," "Storage Containers," "Minimum Aisle Space and Storage Configuration, " " Authorized Waste Identification, " "Management of Containers," "Containment Systems," and "Inspection Schedules and Procedures."
Attachment G includes "General Facility Operations and Waste Management Practices," "Container Handling and Inspection, " "Security and Access Control," "Preparedness and Prevention, " "Preventing Water Supply Contamination, " "Mitigating Effects of Power Outages," " Air Emissions Standards for Containers," " Area L Container Storage Area" including Area L "Security and Access Control," Area L "Preparedness and Prevention," Area L "Mitigating Effects of Power Outages," "Container Storage Within Area L," describing "typical storage structures and locations," " Area G Container Storage Area, " including Area G "Security and Access Control," Area G "Preparedness and Prevention," Area G "Mitigating Effects of Power Outages," "Container Storage within Area G," with "typical structures and locations," "T A-54 West Container Storage Area, " with T A-54 West "Security and Access Control," TA-54 West "Preparedness and Prevention," and "Container Storage within TA-54 West."
NMED cannot discern a pattern to this subject matter arrangement, and believes that it serves to make review of the Application by NMED and by the public more difficult.

**SPECIFIC COMMENTS**

**1. Table I-I**

Revise to accurately indicate regulatory requirements and their place in the Application For example, as stated in General Comments 5 and 6 above, post-closure care and groundwater monitoring requirements are not NA. Cost estimate, financial assurance, and liability requirements are NA. The W AP and Inspection Plan are in the General Facility-wide Application.

**2. Sections 2.1.1, 2.1.2, 2.1.3, Area G, Area L, and TA-54 West**

Revise the Application to include all CSU's. Areas G and L and TA-54 West are not each comprised of only one CSU.

**3. Sections 2.1.1.1, 2.1.2.1, 2.1.3.1, Storage Structures, Locations and Capacities**

a) The total area and overall storage capacity at each of the CSU's within Areas G and L and T A-54 West must be provided. Revise the Application to include the total storage area and maximum storage capacity at each storage structure within Areas G and L and T A-54 West.

b) Revise the Application to discuss the size of the outside drum storage areas and provide the maximum number of drums that may be stored outside on pallets.

c) Revise the Application to include a specific discussion of the type of waste, the type of waste container, and the volume of waste that will be stored at each CSU.

**4. Sections 2.1.1.2, 2.1.2.2, 2.1.3.2, Storage Containers**

a) The Application must discuss each type of waste container that will be used to store each type of waste at Areas G and L and TA-54 West. Revise the Application to strike the words "may be stored" and "not limited to" and include all types of waste containers that may be used to store waste at Areas G and L and TA-54 West.

b) Revise the Application to specify how the presence of free liquids will be determined. Also include what criteria will be used to demonstrate no free liquids, for example less than one percent.

c) The Application states that storage containers are kept from contact with any potentially accumulated liquids. Revise the Application to either include a reference to where in the

Application this is demonstrated or to add a discussion that demonstrates how containers will be kept from contact with any potentially accumulated liquids.

d) The Application indicates that some containers do not require elevation to prevent contact with accumulated liquids while other containers would require placement on a pallet or a steel grate. Revise the Application to discuss which types of containers are elevated by design and therefore do not require additional elevating and specifically which containers will be stored on pallets and which types on steel grates. Revise the Application to specify that if a container is not placed on either a pallet or steel grate then the container will exhibit waste compatibility with any accumulated liquid.

**5. Sections 2.1.1.3, 2.1.2.3, 2.1.3.3, Minimum Aisle Space and Storage Configuration**

a) The requirements for aisle space at 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.35) state that aisle space must be maintained which will allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the Facility in an emergency. The Application indicates that for all storage locations an aisle space of two feet will be used. It is questionable whether an aisle space of two feet will be adequate to meet the above stated requirements. Standard industry practice is to use three feet of aisle space. Either provide adequate justification for the use of an aisle space of two feet in all storage locations within Areas G and L and TA-54 West or modify the Application to specify that a minimum of three feet aisle space will be maintained.

b) A container layout figure for each CSU within Areas G and L and TA-54 West must be provided. The figure should contain a layout of the storage location, location of each type of storage container, location of aisles, and location of containment systems. Revise the Application to include container layout figures for each of the CSU's in Areas G and L and TA-54 West.

c) The Application states that all containers will be stacked to a maximum of three high, unless size and weight restrictions prohibit it for safety reasons. Revise the Application to include a discussion of specific criteria and methods that will be used to determine the maximum stacking height for each type of container.

**6. Section 2.3, Condition of Containers**

a) The Application states that any waste container not in good condition will be overpacked or the waste repackaged in a container in good condition. The materials of the overpack container must be compatible with both the waste and the other container. In addition, the overpack container and/or new container must be compatible and resistant to

environmental conditions, for example corrosion. Revise the Application to include a discussion of this information.

b) Containers must be shown to be free of surface contamination. Revise the Application to discuss how containers will be examined or surveyed to determine if the outside surfaces are free of contamination.

c) The Application does not address container liners. For example, 55-gallon steel drums are often lined with a rigid, molded polyethylene or other compatible liner. These liners are typically procured to a specification describing the functional requirements of fitting inside the drum, material thickness and tolerances, and quality controls and required testing. Also, a quality control program is instated to ensure liners meet the needed tolerances and specifications. Revise the Application to discuss liners for all containers, requirements, including waste and container compatibility, and quality control procedures to ensure compliance with the requirements.

d) Ventilation systems for waste containers and overpacks are not discussed in the Application. For safety reasons, radiological waste containers are typically vented to prevent the buildup of gases. In addition, the vents are typically filtered to retain particles but still allow for the escape of gases. Revise the Application to discuss ventilation ports for prevention of pressurization of waste containers. Also discuss which containers will have ventilation ports and whether filtered ports for preventing the escape of radionuclides to the atmosphere will be used.

e) For each type of container listed, the maximum number of each type of container allowed at each area should be provided. In addition, the type of waste placed in each container should also be provided. Revise the Application to include this information.

f) Several types of containers are mentioned in the Application in the description of storage containers at Sections 2.1.1.2, 2.1.2.2, and 2.1.3.2, but a more detailed description is stated as being in Section 2.3. All of these containers, for example gas cylinders, small containers, and oversized irregularly shaped containers, are not described in Section 2.3. Revise the Application to include a detailed description of all containers to be used for storage of any waste.

**7. <u>Section 2.4, Compatibility of Waste with Containers</u>**

The Application states that only containers made of or lined with materials that will not react with wastes stored in them will be used. Revise the Application to provide a discussion of the documentation of waste compatibility for each of the containers and liners to be used and to provide a reference to the January 1999 LANL T A-54 Part B Permit Application, Supplement G- 2. In addition, discuss what types of waste will be placed in each type of container.

**8. Section 2.5, Management of Containers**

a) The Application states that waste containers will be handled in a manner that will not cause them to rupture or leak. The handling methods and equipment required for handling for each type of container should be discussed. Revise the Application to include a discussion of the handling methods and any special handling equipment that may be used for each type of container to ensure waste containers will be handled in a manner that will not cause ruptures or leaks.

b) The Application states that waste containers will be opened within a work enclosure that provides confinement, preventing any release of waste constituents. A detailed description of the waste enclosure, including any special ventilation systems, waste containment systems and special handling requirements should be provided in the Application. Revise the Application to outline specific waste handling requirements for opening waste containers and the work enclosure area for each type of waste container and waste type.

c) Revise the Application to specify the procedures for transporting waste between different CSU's within Areas G, L, and TA-54 West and between Areas G, L, and TA-54 West.

**9. Section 2.6, Containment Systems**

a) Revise the Application to include a description of the containment system for each CSU sufficient to demonstrate compliance with 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.175). If the Application states that no liquid waste will be stored at a CSU, then secondary containment compliant with 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 175(b)(1» is not required at that CSU.

b) The containment requirements at 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.175(b)(1)) are not addressed in the Application for CSU's where liquids will be stored. Specifically, the Application must discuss the underlying base of the containment systems and demonstrate that the base will be free of cracks or gaps and will be sufficiently impervious to contain leaks, spills, and accumulated precipitation until any collected material is detected and removed. Revise the Application to discuss the base of the containment systems and to demonstrate compliance with the appropriate regulations.

c) The Application states that accumulated liquids will be removed from containment areas. However, 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 175(b)(5» requires that spilled and leaked waste and all accumulated liquids must be removed in a timely manner to prevent overflow of the collection system. Revise the Application to state that all accumulated liquids will be removed in a timely manner to prevent overflow of the

collection system. In addition, the Application Section 2.7 briefly mentions inspections of containment systems. In addition to the inspections, revise the Application to discuss or refer to the section of the Application that discusses the detection systems or alarms that may used for determining the presence of accumulated liquids.

d) Revise the Application to provide calculations showing the requirements for secondary containment at each CSU and demonstrating the amount of liquid and needed containment requirements. Revise the Application to include containment calculations.

e) Revise the Application to include, in addition to the description of secondary containment, a calculation of the surface area and the quantities of liquid that would be contained in the secondary containment area for each CSU.

**10. Section 2.8, Special Requirements for Ignitable, Reactive and Incompatible Waste**

a) The Application must include engineering drawings or other data that will demonstrate that containers of ignitable or reactive waste are located at least 50 feet from the TA boundary. Revise the Application to include this figure.

b) The Application states that policies are in place that minimize the possibility of accidental ignition. Revise the Application to include a discussion of these specific policies. Precautions to be taken must include prevention of ignition, spontaneous ignition, and radiant heat.

c) The requirements for incompatible waste at 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 177(c» are not addressed. A storage container containing incompatible hazardous waste must be separated from other materials or be protected from other materials by means of a berm, dike, wall, or other device. Revise the Application to specify that incompatible wastes will be separated and segregated from other wastes and materials by means of a berm, dike, wall, or other specific means.

d) The Application must describe all processes that will be used to prevent reactions that may generate extreme heat or pressure, fire, explosions, or violent reactions; produce uncontrolled flammable fumes, dust, or gases in sufficient quantities to threaten human health or the environment; produce uncontrolled flammable fumes, dust, or gases in sufficient quantities to pose a risk of fire or explosions; damage the structural integrity of the facility; or otherwise be a threat to human health or the environment. Revise the Application to include a discussion of these prevention processes.

e) Under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 17(b)(4», the Application must ensure the management of incompatible wastes within a CSU where secondary containment systems will be used and show that the presence of incompatible wastes will

not cause the secondary containment system to leak, corrode, or fail. Revise the Application to discuss safeguards that are in place to ensure the compatibility of incompatible wastes with the secondary containment systems.

11. Section 2.9. Closure

a) Revise the Application to specify that at closure of a CSU all hazardous waste and hazardous waste residues will be removed or decontaminated and the performance standards, schedule, and all other requirements of20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G) will be complied with.

b) The Application does not address surrounding and underlying soil that may be contaminated with hazardous or radioactive waste or hazardous or radioactive waste residues as required under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.178). Revise the Application to specify that, as part of closure, all soils contaminated with or containing hazardous waste and hazardous waste residues will be either decontaminated or removed. Also revise the Closure Plans for Areas L, G, and TA-54 West, Application Attachments F.1, F.2, and F.3, to include monitoring, sampling, and removal or decontamination of surrounding soils affected by hazardous or radioactive waste or hazardous or radioactive waste residues.

c) Revise the Application to specify that all schedule requirements under 20.4.1.500 NMAC (incorporating 40 C.F .R. Part 264, Subpart G) will be complied with, including: 1) all hazardous waste will be treated or removed off-site within 90 days from receipt of the final volume of waste at the unit and 2) all closure activities will be completed within 180 days from receipt of the final volume of hazardous waste at a unit.

d) To comply with 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.113(a) and (b», the Application must include a statement that for closure activities to exceed 90 days for treatment or removal of wastes or 180 days for completion of closure activities, the Secretary must approve a permit modification to include a schedule of closure that justifies a longer period of closure time will be submitted. All requirements of 20.4.1.500 (incorporating 40 C.F.R. § 264.113) must be met, including demonstration of the following: closure activities require longer than 90 or 180 days; the unit has the capacity to receive additional wastes; there is a reasonable likelihood that another person or operator will recommence operation of the site within one year and closure would be incompatible with continued operation; and Permittees have taken and will continue to take all steps to prevent threats to human health and the environment, including compliance with all applicable permit requirements. Revise the Application to include this information.

e) Revise the Application to demonstrate compliance with all closure and post-closure requirements under 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G) for MDA's G, H, and L.

**12. Section 2.10.1, Area L**

The Application states that structural and operational controls will be used to divert storm water to a single outfall. The structural controls are listed and run-off pathways are shown on Figure A-17 of Attachment A. However, the Application does not discuss the operational controls that will be used to manage run-on and run-off. Revise the Application to discuss the operational controls at each CSU and for MDA L as a whole for controlling run-on and run-off.

**13. Section 4.0, Corrective Action for Solid Waste Management Units**

Revise the Application to reference SWMU Reports to be submitted for information about SWMU's to comply with 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 14(d». For each SWMU listed in Sections 4.1.1 through 4.1.3, dimensions, materials of construction, dates of operation, engineering drawings (if available), and quantity and/or volume of waste placed in each SWMU must be included in the Application.

**14. Section 4.1.1.2, Gas Cylinder Storage**

Revise the Application to include the gas cylinder storage as a hazardous waste management unit CSU.

**15. Section 4.1.1.3, Material Disposal Area**

MDA L is a regulated unit subject to closure and post-closure care requirements. Revise the Application to specify how MDA L will comply with closure and post-closure care requirements.

**16. Section 4.2.1, Description of Releases at TA-54, MDA L**

NMED does not agree that releases from ~A L have been adequately characterized. The nature and extent of releases from MDA L have been only partially characterized at this time. The full nature and extent of releases from MDA L, and also MDA's G and H, must be determined in order to comply with closure and post-closure care requirements. Revise the Application, including the Closure Plan and Post-Closure Plan, to specify how the nature and extent of releases from MDA's G, H, and L will be determined in compliance with closure and post-closure schedules, performance standards, and other requirements under 20.4.1.500 NMAC (incorporating 40 C.F .R. Part 264, Subpart G) and groundwater monitoring requirements under 20.4.1.500 NMAC (incorporating 40 C.F.R. §§ 264.91 through 100).

The Application must identify all releases that may have occurred from any of the Container Storage Units. In addition, the date of the release, type of waste released, quantity or volume released, nature of release, and groundwater monitoring and other analytical data available to describe the nature and extent of release should be provided. Other data may include physical evidence of distressed vegetation or soil contamination, historical evidence of releases, state, federal, or local enforcement actions, public complaints, and any other information indicating the migration of a release. Revise the Application to include this information.

**17. Section 4.2.2, Description of Releases at TA-54, MDA G**

The full nature and extent of releases from MDA G, and also MDA's H and L, must be determined in order to comply with closure and post-closure care requirements. Revise the Application, including the Closure Plan and Post-Closure Plan, to specify how the nature and extent of releases from MDA's G, H, and L will be determined in compliance with closure and post-closure schedules, performance standards, and other requirements under 20.4.1.500 NMAC (incorporating 40 C.F .R. Part 264, Subpart G) and groundwater monitoring requirements under 20.4.1.500 NMAC (incorporating 40 C.F.R. §§ 264.91 through 100).

The Application must identify all releases that may have occurred from any of the CSU's at Area G. In addition, the date of the release, type of waste released, quantity or volume released, nature of release, and groundwater monitoring and other analytical data available to describe the nature and extent of release should be provided. Other data may include physical evidence of distressed vegetation or soil contamination, historical evidence of releases, state, federal, or local enforcement actions, public complaints, and any other information indicating the migration of a release. Revise the Application to include this information.

**18. Section 4.2.3, Description of Releases at TA-54 West**

The methodology, for example review of groundwater or soil data, used to determine that releases from CSU's are not present must be provided. Revise the Application to include this information.

**19. Section 4.3, Characterization of Releases**

The Application must identify the date or approximate date of the release, type of waste released, actual or estimated quantity or volume released, nature of release, and groundwater monitoring and other analytical data available to describe the nature and extent of any releases. Other data may include physical evidence of distressed vegetation or soil contamination, historical evidence of releases, state, federal, or local enforcement actions, public complaints, and any other information indicating the migration of a release. Revise the Application to include this information.

**20. Section 4.4, Corrective Action**

The Application states that corrective action will be conducted in accordance with the Resource Conservation and Recovery Act (RCRA) Facility Investigation/Corrective Measures Study (FI/CMS) process and that final corrective measures will be determined by implementing the LANL Environment Restoration (ER) Project MDA Core Document. However, 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.101) and 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 14(d)) require that the Application specify corrective actions and how they will be implemented for each solid waste management unit (SWMU). Revise the Application to include current information on corrective action for SWMU's at the site.

For regulated units, requirements for investigation and remediation of releases under 20.4.1.500 NMAC (incorporating 40 C.F.R §§ 264.91 through 100 and Part 264, Subpart G) must be met. For regulated units, the Application must specify how investigation and remediation of releases will be completed in compliance with the performance standard, schedule, and other groundwater monitoring, closure, and post-closure requirements, rather than only reference the corrective action program of the LANL ER Project. Revise the Application accordingly.

**21. Attachments F-1, F-2, and F-3, Closure Plans for MDA's G and L and TA-54 West**

Information related to the closure performance standards, amendment of the closure plan, closure certification and report, survey plat, closure of land disposal units, and post-closure care requirements for T A-54 are not provided in the Application but referenced to the Facility-wide General Part B Application. Revise the Application T A-54 Closure Plan and Post-Closure Plan to include demonstration of compliance with these requirements.

Revise the Application Section F .2 to delete the statement that the General Part B Permit Application includes closure cost estimate, financial assurance, and liability requirements. Permittees are exempt from financial assurance and liability requirements, and the General Application does not include cost estimate, financial assurance and liability requirements.

Revise the Application to include closure requirements for all CSU's at T A 54.

Revise the Application so as to not describe in the present tense hazardous waste management units that do not yet exist, for example the CHAPS unit.

**22. Attachments F.1.1, F.2.1, F.3.1, Estimate of Maximum Waste in Storage**

a) In addition to the total maximum inventory of waste stored within Areas G and L and TA-54 West, the Application must provide an estimate of the maximum amount of waste located on-site over the active life of Areas G and L and TA-54 West, including hazardous waste disposed of at any time during the active life of Areas G and L. Revise

the Closure Plan to include an estimated inventory of hazardous waste disposed of at Areas G and L.

b) The Application must also provide an estimate of the maximum inventory for each type of waste and within what types of containers that waste is contained. In addition, the Application must include a discussion of how much waste and what type of waste are located at each CSU within Areas G and L and TA-54 West. Revise the Application to include for each CSU the maximum quantity of waste, waste type, maximum capacity based on area, and the maximum number of containers by container type.

**23. Attachments F.1.2, F.2.2, Description of Waste**

Revise the Application to identify all waste sources, not only those "primarily" constituting wastes generated.

**24. Attachments F.1.3, F.2.3, F.3.3, Removal of Waste**

a) Revise to address closure of all CSU's, and to specify that partial closure means closure of an entire CSU.

b) According to 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(3», the types of off-site hazardous waste management facilities to be used must be identified. Revise the Application to discuss the types of waste that will be shipped to which specific off-site facility.

**25. Attachments F.1.4, F.2.4, F.3.4, Partial Closure**

Revise the Application to specify that partial closure means closure of a hazardous waste management unit.

**26. Attachments F.1.5, F.2.5, F.3.5, Closure Procedure and Decontamination**

a) Under 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(4)), a detailed description for the closure of each CSU must include the steps needed to remove or decontaminate all hazardous waste and hazardous waste residues and contaminated containment system components, equipment, structures, and soils during partial and final closure, including, but not limited to, procedures for cleaning equipment and removing contaminated soils, methods for sampling and testing surrounding soils, and criteria for determining the extent of decontamination required to satisfy the closure performance standard. At closure of a CSU, removal or decontamination of hazardous waste and hazardous waste residues, including from asphalt and soil, must comply with all closure requirements under 20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G),

including performance standards and schedule requirements, and not only under LANL's Environmental Restoration Project corrective action. The Application does not address methods for sampling and testing surrounding soils and removing contaminated soils during either partial or final closure. Revise the Application to address all closure requirements for asphalt and surrounding soils and soil that may underlie CSU's.

b) The Application states that all sampling will be done in accordance with Quality Assurance/Quality Control (QA/QC) procedures. Revise the Application to include these QA/QC procedures.

c) The schedule for closure activities for TA-54 is presented in Tables F.1.1, F.2-1, and F.3-1. However, the schedule does not appear to allow for the sampling, analysis, and potential removal of contaminated soils surrounding the CSU's. It is not apparent that the schedule allows time for proper data validation, time to treat wastes, time for additional leaching tests for the asphalt or storage walls and floors, or adequate time for transporting wastes to disposal sites, if warranted. In addition, Application Sections F.l.4, F.2.4, and F.3.4 state that some structures in the CSU may be left in service during partial closure. Revise the schedule to be comprehensive of all potential activities for partial and final closure.

d) The Application states that personal protective equipment (PPE) and radiation and chemical monitoring requirements will be determined by the LANL Health Physics Operations and Industrial Hygiene and Safety Groups. The Application should include a discussion of the potential PPE needed at each CSU and a detailed discussion of the radiation and chemical monitoring equipment and monitoring requirements that could be used at each CSU. Revise the Application to include a discussion of PPE, for both radiological and chemical contamination, and the types of monitoring instruments and other equipment that may be employed for radiological and chemical monitoring and characterization. The Application should also discuss how these monitoring instruments will be used, for example scanning percent, to determine the presence of contamination and hot spots.

e) The Application states that all workers will have proper training and medical monitoring. Reference where in the Application compliance with the training requirements and medical monitoring requirements for workers is discussed.

f) The Application discusses how a baseline or background level for the wash water solutions will be determined. However, there is no discussion of how background levels for soils will be determined. As part of closure of CSU's, Permittees must demonstrate that hazardous waste and hazardous waste residues have been removed from all soils surrounding the CSU's. Revise the Application to reference "Inorganic and Radionuclide

Background Data for Soils, Canyon Sediments, and Bandelier Tuff at Los Alamos National Laboratory," Ryti et al., 1998, for determination of background soil levels.

g) The Application states that each storage structure will be inspected for any cracks or conditions that would potentially lead to loss of decontamination liquids. If any are found, appropriate remedial actions, for example repairs, maintenance, or replacement, will be conducted. The Application does not specify whether the cracks or other conditions will be monitored for contamination prior to sealing or other treatment. Contamination could be sealed within a crack of a structure. Revise the Application to specify how these flaws in storage structures will be monitored to ensure no contamination has migrated into the flaw prior to remedial action.

**27. Attachment F.1.5.1, F.2.5.1, F.3.5.1, Decontamination of Storage Structures**

a) The Application states that a wash water solution will be used in the decontamination of portable equipment. Revise the Application to specify what will comprise the wash solution and discuss the appropriateness of this solution for removing organics, inorganics, and radionuclides.

b) The use of a wash water solution may be appropriate for removal of loose contamination, but will not remove fixed contamination. Revise the Application to specify how portable equipment and storage structure walls and floors will be decontaminated for fixed contamination.

c) The Application states that a portable berm may be used to collect and contain wash water. Revise the Application to specify what alternate methods may be used, if the portable berm is not used, for containment of wash water.

d) The Application states that additional testing may be used to determine if leaching of contaminants from the floors or walls is contributing to elevated readings in the wash water. Revise the Application to include what sampling and analytical methods will be used to determine if leaching from the structure floors or walls is the source of contamination in the wash water .

e) The Application indicates that wash water will be allowed to accumulate in the bottom of recessed areas, for example sumps, where the water will be removed and tested for potential contamination. The Application does not discuss how the recessed area where the wash water is allowed to collect will be decontaminated if the results from the wash water indicate contamination. Revise the Application to specify how the entire recessed area will be decontaminated and verified.

f) Sumps are often connected to a central drainage system. Revise the Application to include a discussion of how drain lines connected to sumps and other recessed areas will be addressed.

g) Revise the Application to include swipe sampling methods and cleanup levels for CSU removal or decontamination confirmation sampling at closure of a CSU .

**28. Attachment F.2.5.2, Decontamination of Storage Shafts**

Delete this Section. The Application Section G.3.4.3 states that the storage shafts at Area G are not compliant with RCRA storage standards. Storage shafts at Area G are not being permitted for storage of hazardous waste.

**29. Attachment F.1.5.3, F.2.5.3, Decontamination of Asphalt-Covered Storage Locations**

a) The Application states that decontamination procedures similar to those described in Application Section F.2.5.1 may be used for asphalt-covered storage areas. It is not clear what other procedures may be used in lieu of those listed in Section F.2.5.1 or as described in this Section. It is also unclear what deviations from the procedure may be applied. Revise the Application to include a discussion of all procedures that may potentially be used to decontaminate the asphalt-covered storage areas.

b) The Application states that portable berms may be used to collect wash water and provide for containment of wash water. It is not clear what other detention devices may be used during decontamination activities to contain potentially contaminated wash waters. Revise the Application to specify all containment devices that may be used during decontamination activities.

c) The Application states that a wash water solution will be used in the decontamination of equipment. Revise the Application to specify what will comprise the wash solution and discuss the appropriateness of this solution for removal of organics, inorganics, and radionuclides.

d) If decontamination verification of asphalt cannot be determined, the Application indicates that the material will be removed from the site. If the asphalt is removed, sampling of the soil underlying the removed asphalt must be conducted in accordance with 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(4). In addition, all contaminated underlying soil must also be removed and verification sampling conducted. Revise the Application to specify how underlying soil will be sampled, removal methods for any contaminated soils, and verification procedures for the remaining soils.

e) 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(4» requires that at partial or final closure all surrounding soils be sampled and tested for potential contamination. The Application does not discuss how soils surrounding the asphalt-covered storage locations will be sampled, how many samples will be taken, what sampling methods will be applied, and how contaminated soils will be removed. Revise the Application to address these requirements regarding surrounding soils at partial and final closure.

f) The Application states that additional testing may be used to determine if leaching of contaminants from the asphalt is contributing to elevated readings in the wash water. Revise the Application to include what sampling and analytical methods will be used to determine if leaching from the asphalt is the source of contamination in the wash water.

g) The Application states that "Potential closure activities of the asphalt-covered storage locations include decontamination, removal, or future remediation under RCRA corrective actions," and "[a] final option is to remediate an asphalt-covered storage location as part of LANL's corrective actions." NMED is not certain what is the intended meaning of these sentences, but they seem to imply that Permittees will choose whether or not to comply with closure requirements for "asphalt-covered storage locations." Revise the Application to identify CSU's and to specify that all CSU's will be closed in accordance with all requirements of20.4.1.500 NMAC (incorporating 40 C.F.R. Part 264, Subpart G), including schedule and performance standard requirements for assessment and remediation of releases.

h) Revise the Application to include all procedures to be used for decontamination of surfaces, and replace "may be used" with "will be used."

i) Revise the Application to include sampling methods and cleanup levels to be used for closure of CSU's.

**30. <u>Attachment F.1.5.4, F.2.5.4, F.3.5.4, Decontamination Equipment</u>**

a) The Application states that a wash water solution will be used in the decontamination of equipment. Revise the Application to specify what will comprise the wash solution and discuss the appropriateness of this solution for removal of organics, inorganics, and radionuclides.

b) The Application states that equipment rinsate blanks will be collected and analyzed in accordance with QA/QC procedures. Revise the Application to include what specific QA/QC procedures will be used.

c) The Application discusses cleaning of equipment, but neither these Sections or Sections F.l.5.5, F.2.5.5, or F.3.5.5 discuss how the decontamination of equipment used during

decontamination procedures of other equipment will be verified, for example sumps or other areas where decontamination water is collected. Revise the Application to include procedures for the proper cleaning or disposal and verification of decontamination of equipment and how levels of residual contamination will be determined.

**31. Attachment F.2.5.5, Decontamination Verification**

a) The Application states that a "sufficient number of samples will be required to demonstrate" decontamination. Revise the Application to specify the method for determining how the number of verification samples for each CSU will be determined

b) The Application states that a wash water solution will be used in the decontamination of equipment. Revise the Application to specify what will comprise the wash solution and discuss the appropriateness of this solution for removal of organics, inorganics, and radionuclides.

c) As discussed in comments related to Application Sections F.I.5, F.2.5, and F.3.5, the Application should provide a listing of expected contaminants (parameters) that may be present at each CSU. Revise the Application to include a listing of potential contaminants at each CSU.

d) The Application states that methods from SW-846 will be used for the confirmation testing. At a minimum, the sample method for each type of constituent, for example organics, metals, and radionuclides, must be provided in the Application. Revise the Application to include a listing of the sample methods to be used for each type or group of constituents present and for each medium to be sampled at each CSA.

e) The Application states that the significance of an increase of contaminants in wash down water is to be determined using statistical methods defined in SW-846. The specific statistical methods that are to be applied should be discussed and provided in the Application. Revise the Application to include the specific statistical methods that will be used to determine if wash down waters show a significant increase in analytical parameters when compared to clean wash water solutions. Also, define numerically a significant increase.

f) The use of testing wash water for determination of decontamination can result in significant dilution of constituents. This method also does not allow for the detection of potential hot spots. Revise the Application to address the potential uncertainties associated with this method of decontamination verification and to address the investigation methods for detecting hot spots and the methods for verification of the decontamination of hot spots.

g) In accordance with NRC Regulatory Guide 1.86, decontamination verification for radionuclides must include swipe analyses of structures or other equipment that is to be left on-site, in order to verify that contamination has been adequately removed, including hot spots. Revise the Application to include the use of swipe sampling methods, how many swipes will be taken, the amount of coverage of the item requiring swipe sampling, and the method of analysis.

h) In addition to swipe sampling to verify decontamination, surveying, using appropriate radiation instruments, must be conducted in areas where radiological contamination may be present. If radiological contaminants exist as fixed contamination, analysis of the wash down water will not indicate the presence of potential fixed radiological contamination. Revise the Application to provide for surveying of each CSU where radiological contamination is a suspected contaminant to verify that no fixed contamination above acceptable levels remains, including hot spots.

i) Decontamination verification for hazardous waste must also be verified using swipe analysis, as outlined in the above comment for radionuclides. Revise the Application to include swipe sampling and analysis for hazardous waste residues. The Application must specify how many swipes will be taken, percent surface coverage, and the method of analysis.

j) The Application does not discuss how surrounding soils will be sampled to ensure that no cross contamination as a result of decontamination activities have occurred. Revise the Application to include a discussion of how soils around areas to be decontaminated will be sampled and verified for potential cross contamination as a result of decontamination procedures.

k) The Application does not discuss soils under or around the CSU's that are to be decontaminated. 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.112(b)(4)) requires that the Application include methods for sampling and testing surrounding soils and verification that closure performance standards are met. Revise the Application to include the methods for sampling and testing surrounding soils at each CSU.

**32. Attachment G, Container Management**

Revise the Application to include all CSU's at T A 54.

**33. Attachment G.1.3, Preparedness and Prevention**

The Application must include the preparedness and prevention requirements of20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.31). Revise the Application to include a statement that each unit has been or will be designed, constructed, maintained, and operated to minimize the

possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to the air, soil, or surface water which could threaten human health or the environment.

**34. Attachment G.1.J.4, Aisle Space and Storage Configuration**

a) Under the aisle space requirements at 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264.35), aisle space must be maintained which will allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment to any area of the Facility in an emergency. The Application Sections 2.1.1.3, 2.1.2.3, and 2.1.3.3 indicate that for all storage locations in each unit, an aisle space of two feet will be used. It is questionable whether an aisle space of two feet will be adequate to meet the above stated requirements. An aisle space of three feet is standard industry practice. As stated in comments to Sections 2.1,1.3, 2.1, 2.3 and 2.1.3.3, revise the Application to either provide adequate justification for the use of an aisle space of two feet in all storage locations or to specify that a minimum of three foot aisle space will be maintained.

b) A container layout figure for each storage location within Area L, Area G, and T A-54 West should be provided. The figures should contain a layout of each storage location, layout of each type of storage container, location of aisles, a.'1d containment systems. Revise the Application to include container layout figures for each of the storage locations in Area L, Area G, and TA-54 West.

**35. Attachment G.1.4.1, Preventing Hazards in Unloading**

The Application states that shed structures may be equipped with a sloped entryway for container handling equipment. Revise the Application to include a list of sheds that have a sloped entryway and, for each shed structure that does not have a sloped entryway, specify what procedures or equipment will be used to prevent hazards during unloading of waste.

**36. Attachment G.1.4.3, Preventing Water Supply Contamination**

Revise the Application to accurately describe current knowledge of perched groundwater at T A- 54. Intermittent perched zones of saturation have been detected during installation of wells at T A-54.

**37. Attachment G.I.4.4, Mitigating Effects of Power Outages**

a) The Application implies that many of the systems, for example continuous air monitors, evacuation alarms, giraffes, sump pumps, lighting, and other monitoring equipment, have battery backup, but not all. Revise the Application to specify which systems have battery

backup. For systems that do not have battery backup, discuss the potential ramifications of the system being shut down, for example the potential for breach of secondary containment and other health and safety issues.

b) 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 14(b)(8)(iv)), requires that the Application provide a description of preventative measures for equipment failure in addition to power outages. Revise the Application to discuss equipment backup systems and other preventative measures that are in place in the event of equipment failure. This should include, but not be limited to, a discussion of backup pumping systems of secondary containment areas.

**38. Attachment G.I.4.5, Preventing Undue Exposure**

a) Prevention of undue exposure to personnel involves not only proper PPE, but also proper training and personnel and area monitoring devices. Revise the Application to include a discussion of training procedures, including waste handling procedures, personal monitoring equipment, and area monitoring equipment and how these items will reduce personnel exposure.

b) Revise the Application to specify that if a situation arises during an emergency where an increased level of PPE is required, all PPE is compatible with the wastes present.

**39. Attachment G.I.4.6, Preventing Releases to the Atmosphere**

It is unclear whether any of the storage containers contain venting to allow for release of buildup of radioactive gases. Revise the Application to specify if any of the waste containers are vented and to address releases of gases from the containers.

Revise the Application to indicate hazardous waste management units that have not yet been constructed. The CHAPS unit is described in the present tense, although it has not yet been constructed.

**40. Attachment G.I.5, Special Requirements for Ignitable, Reactive, or Incompatible Waste**

Revise this Section of the Application to address applicable comments above related to Application Section 2.8. A summary of applicable Section 2.8 comments follows. The Application must include engineering drawings or other data demonstrating that containers of ignitable or reactive waste are located at least 50 feet away from the TA boundary. The Application must include specific policies for prevention of ignition, spontaneous ignition, and radiant heat. The Application must specify that incompatible wastes will be separated and segregated from other wastes and materials by means of a berm, dike, wall, or other specific

means. The Application must describe all processes that will be used to prevent reactions that may generate extreme heat or pressure, fire, explosions, or violent reactions; produce uncontrolled flammable fumes, dust, or gases in sufficient quantities to threaten human health or the environment; produce uncontrolled flammable fumes, dust, or gases in sufficient quantities to pose a risk of fire or explosions; damage the structural integrity of the Facility; or be a threat to human health or the environment. The Application must specify that the management of incompatible wastes within a storage area with a secondary containment system will not cause the secondary containment system to leak, corrode, or fail. Revise the Application to include a discussion of these prevention processes and to discuss safeguards that are in place to ensure the compatibility of incompatible wastes with the secondary containment systems.

**41. Attachment G.I.6, Air Emission Standards *for* Containers**

a) The Application states that the Subpart CC regulations are not applicable to containers of mixed waste. However, the Subpart CC requirements may apply to mixed waste containers, but do not apply to a waste management unit used solely for the management of radioactive mixed waste in accordance with all applicable regulations under the Atomic Energy Act (AEA) and the Nuclear Waste Policy Act (NWP A). Clarify the Application to reflect the language of the regulation in 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 1080(bX6». The Application must demonstrate that containers of non-mixed hazardous waste and containers in hazardous waste management units not used solely for mixed waste or not compliant with AEA and NWP A regulations meet the requirements of Subpart CC.

b) The Application states that containers meet U.S. Department of Transportation (DOT) specifications of 49 C.F .R. Part 178. Revise the Application to include a description of the specific specifications in 49 C.F .R Part 178 and the criteria for determining compliance with these specifications for each type of container to be used for storage at Area L, Area G, and TA-54 West.

c) In addition to containers being closed, 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 1086(c)(1)(ii» also requires that cover and closure devices form a continuous barrier over the container openings such that when the cover and closure devices are secured in the closed position there are no visible holes, gaps, or other open spaces into the interior of the container. Revise the Application to specify that, in addition to containers being closed, the closing devices will be secured in a manner that there are no visible holes, gaps, or other open spaces into the interior of the container.

d) The Application states that containers subject to 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 1088(b)) inspection requirements "will be subject to a visual inspection and monitoring program as required by 264.1088(b) addressed in Attachment C of this document. " The entire reference to § 264.1088(b) inspection and monitoring

requirements in Attachment C states that subject containers "will be subject to a visual inspection and monitoring program as required by 40 C.F.R. § 264.1088(b)." Revise the Application to include an inspection and monitoring program in compliance with 20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 1088(b)). Revise the Application to include accurate references.

**42. Attachment G.2, Area L Container Storage Area**

Revise the Application to include all CSU's.

**43. Attachment G.2.4, Container Storage Within Area L**

a) The Application must contain a description of all CSU's that will be used to store waste at Area L, not just typical areas included as examples. Revise the Application to discuss each specific CSU to be permitted within Area L. Apply the following Comment Numbers 44 through 52 regarding specific storage locations to all CSU's and only CSU's at Area L. For details of construction, layout, or other elements that are common between different CSU's, the detailed description may be provided for one CSU, along with a specific description of which other CSU's share those components and which CSU's deviate from the description provided. Provide, in addition to the examples, a detailed description of any CSU elements that deviate from the examples provided.

b) For CSU's for which authority is sought to store liquid waste, the Application addresses requirements of20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 15(a)(l» but not 20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 15(a)(3». The Application must provide the capacity of the containment system relative to the number and volume of waste to be stored in each CSU. In conjunction with this, the Application must provide the volume of waste and waste container types for each CSU. A layout of the CSU showing waste container placement must also be provided. Revise the Application to include this information.

c) This Section refers to Section 2.6 for the methods of how potential liquids that might accumulate within the containment areas will be collected and characterized. Refer to technical comments related to Section 2.6.

d) Revise the Application so that for all CSU's for which compliance with 20.4.1.500 NMAC (incorporating 40 C.F .R. § 264. 175(b » is not demonstrated, the Application states that liquids will not be stored at those CSU's. For these CSU's, the Application must state that the requirements of20.4.1.500 NMAC (incorporating 40 C.F.R. § 264. 175(c» will be met.

**44. Attachment G.2.4.1, TA-54-215, Storage Dome**

Revise the Application to include a reference to the figure " Area L Mixed Waste Storage Building, Building 54-215." Also, label the figure with a figure number for easier reference and ensure this figure is provided in the Application.

**45. Attachment G.2.4.2, TA-54-216, Canopy**

The Application does not contain an engineering drawing or figure showing the canopy at Building 216. Revise the Application to include a figure showing the basic design and parameters, dimensions, and materials of construction for the canopy.

**46. Attachment G.2.4.3, Typical Asphalt-Covered Areas**

The Application does not contain engineering drawings or figures showing all asphalt-covered area CSU's. Revise the Application to include figures showing the basic design and parameters, sloping and direction of sloping, berms, dimensions, and materials of construction for asphalt- covered CSU's.

**47. Attachment G.2.4.4, Typical Storage Shed**

a) Revise the Application to provide a reference in the text to the engineering details and technical specifications for storage sheds at T A-54 as provided in Supplement G-2 to the January 1999 T A-54 Part B Permit Application.

b) The Application states that storage sheds are generally located on asphaltic concrete foundations. Revise the Application to include what other foundations may be used.

c) Revise the Application to include the specific number and location of storage sheds that meet each type of description provided, for example which sheds are on concrete foundations and which sheds are elevated by design.

d) Much of the construction information is described as "typically." Revise the Application to remove the word "typically" and to provide specific material construction information for each shed. For details of construction, layout, or other elements that are common between different sheds, the detailed description may be provided for one shed, along with a specific description of which other sheds share those components and which sheds deviate from the description provided. Provide, in addition to the examples, a detailed description of any shed elements that deviate from the examples provided.

**48. Attachment G.2.4.5, TA-54-32, Concrete Containment Structure**

Revise the Application to include a reference to the figure " As-Built Critical Facility, T A-54 Area L, Building 32." Also, label the figure with a figure number for easier reference and include this figure in the Application.

**49. Attachment G.2.4.6, Containment Structure**

Revise the Application to include a reference to the figure " As-Built Record Floor Plan, T A-54 Area L, Building 62, 58, 36, and 35." Also, label the figure with a figure number for easier reference and include this figure in the Application.

**50. Attachment G.2.4.7, TA-54-36, Sampling Pad**

Revise the Application to include a reference to the figure " As-Built Record Floor Plan, T A-54 Area L, Building 62, 58,36, and 35." It is not clear from the drawing where the airlock personnel door exiting to the outside and to the main enclosure is located. Provide this on the figure. Also, label the figure with a figure number for easier reference and include this figure in the Application.

**51. Attachment G.2.4.8, Transportation Pad**

Revise the Application to include a reference to the figure " As-Built Record Floor Plan, T A-54 Area L, Building 62, 58, 36, and 35," Also, label the figure with a figure number for easier reference and include this figure in the Application,

**52. Attachment G.2.4.9, Storage Shafts 36 and 37**

In the revised Application demonstrate that the storage shafts at Area L are compliant with RCRA regulations for storage and reference the as-built engineering drawings of Storage Shafts 36 and 37 as contained in Supplement 0-1 to the January 1999 T A-54 Part B Permit Application

**53. Attachment G.3.4, Container Storage Within Area G**

a) The Application must contain a description of all CSU's at Area G, including storage structures and asphalt-covered locations, that will be used to store waste at MDA G, not just typical structures as examples. Revise the Application to include each specific storage area within Area G. Apply the following Comment Numbers 54 through 58 regarding specific storage locations to all CSU's and only CSU's at Area G. For details of construction, layout, or other elements that are common between different CSU's, the detailed description may be provided for one CSU, along with a specific description of which other CSU's share those components and which CSU's deviate from the description

provided. Provide, in addition to the examples, a detailed description of any CSU elements that deviate from the examples provided.

b) This Section addresses the requirements of20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 15(a)(I». However, the Application does not address the requirements of20.4.1.900 (incorporating 40 C.F.R. § 270. 15(a)(3». The Application must provide the capacity of the containment system relative to the number and volume of waste to be stored in each CSU. In conjunction with this, the Application must provide the volume of waste and waste container types for each CSU. A layout of the CSU showing waste container placement must also be provided. Revise the Application to include this information.

c) This Section refers to Section 2.6 for the methods of how potential liquids that might accumulate within the containment areas will be collected and characterized. Refer to technical comments related to Section 2.6.

**54. Attachment G.3.4.1, Typical Storage Dome**

Engineering drawings are provided illustrating dome structures, but the drawings are not identified relative to specific CSU's in the text. Revise the Application text to reference engineering drawings or figures showing the basic design and parameters, dimensions, materials of construction, engineering details, and technical specifications for the storage domes at Area G, as provided in Supplement G-2 of the January 1999 TA-54 Part B Permit Application. Ensure that the figure is labeled accordingly and has a figure number associated with it and a reference in the text identifying the specific CSU.

**55. Attachment G.3.4.2, Typical Asphalt-Covered Areas**

The Application does not contain engineering drawings or figures showing all asphalt-covered area CSU's. Revise the Application to include figures showing the basic design and parameters, sloping and direction of sloping, berms, dimensions, and materials of construction for all asphalt- covered area CSU's, and include references in the text identifying the drawings or figures.

**56. Attachment G.3.4.3, Storage Shaft Field**

Delete this Section. This Section states that the storage shafts at Area G are not compliant with RCRA storage requirements. The storage shafts are not being permitted for storage of hazardous waste.

**57. Attachment G.3.4.4, Typical Storage Shed**

a) The Application does not provide engineering drawings or figures for all storage shed CSU's at Area G. Revise the Application to reference engineering details and technical

specifications for storage sheds at T A-54 as provided in Supplement G-2 to the January 1999 T A-54 Part B Permit Application.

b) The Application states that storage sheds are generally located on asphaltic concrete foundations. Revise the Application to specify what other foundations may be used.

c) Revise the Application to include the specific number and location of storage sheds that meet each type of description provided, for example which sheds are on concrete foundations and which sheds are elevated by design.

d) Much of the construction information is stated as being "typically." Revise the Application to remove the word "typically" and provide specific material construction information for each shed. For details of construction, layout, or other elements that are common between different sheds, the detailed description may be provided for one shed, along with a specific description of which other sheds share those components and which sheds deviate from the description provided. Provide, in addition to the examples, a detailed description of any shed elements that deviate from the examples provided.

**58. <u>Attachment G.3.4.5, Typical Pre-Engineered Structure</u>**

a) The Application does not provide engineering drawings or figures for all pre-engineered structures at Area G. Also, it is not clear if the engineering details and technical specifications for typical pre-engineered structures at T A-54 as provided in Supplement G-2 to the January 1999 T A-54 Part B Permit Application include the DVRS and DVRS Modular Containment structures. Revise the Application to include the DVRS Part A dated November 1999. Revise the Application to include an engineering drawing of the DVRS and DVRS Modular Containment structures or provide a reference to the engineering details and technical specifications within the Application. Engineering details and technical specifications must be provided for each pre-engineered structure.

b) The Application includes a discussion of TA-54-412, emergency equipment and hazards control building. It is not clear whether waste will be stored within this building. The Application also states that the building meets criteria for performance criteria 2 structures. Revise the Application to specify whether waste will be stored in this building and clarify the building specification.

c) Revise the Application to include an engineering drawing for the TA-54-420 CHAPS. Include on the drawing the characterization containment cells.

d) Revise the Application to not describe in the present tense units that are to be constructed in the future, for example the CHAPS unit.

**59. Attachment G.4, TA-54 West Container Storage Area**

Revise the Application to include all CSU's at T A-54 West. Apply the following Comment Numbers 61 and 62 regarding specific storage locations to all CSU's and only CSU's.

**60. Attachment G.4.4, Container Storage Within TA-54 West**

a) This Section addresses the requirements of20.4.1.900 NMAC (incorporating 40 C.F.R. § 270. 15(a)(l». However, the requirements of20.4.1.900 (incorporating 40 C.F.R. § 270. 15(a)(3» are not addressed. The Application must provide the capacity of the containment system relative to the number and volume of waste to be stored in each CSU. In conjunction with this, the Application must provide the volume of waste and waste container types for each CSU. A layout of each CSU showing waste container placement must also be provided. Revise the Application to include this information.

b) This Section refers to Section 2.6 for the methods for how potential liquids that might accumulate within the containment areas will be collected and characterized. Refer to technical comments related to Section 2.6.

**61. Attachment G.4.4.1, Indoor Storage Area**

Figure 0-5 provides a general layout of Building T A-54-38, however, a detailed engineering drawing of the building must be included in the Application. Revise the Application to include an engineering drawing of Building TA-54-38, including each office, high bay, low bay, and loading dock area, and including basic design and parameters, dimensions, and materials of construction.

**62. Attachment G.4.4.2, Outdoor Storage Pad**

a) While Figure G-5 shows the location of the outdoor storage pad, the figure does not indicate sloping, direction of sloping, and berms. Revise the Application to indicate and to include a reference to Figure A-19.

b) The Application states that other structures may be placed on the outdoor pad for storage of equipment or other non-RCRA regulated activities. Revise the Application to specify what other type of structures may be used and what other activities may take place.